DALLAS MAXIM
SEMICONDUCTOR

Quality Assurance

4401 S. Beltwood Parkway
Dallas, Texas 75244

PCN # E030101

DATE: 6/05/03

PRODUCT CHANGE NOTICE FORM

DALLAS SEMICONDUCTOR/MAXIM HEREBY ISSUES NOTIFICATION OF CHANGE
THAT MAY AFFECT THE FOLLOWING CATEGORIES:

☒ DESIGN	☐ WAFER FAB	☐ ASSEMBLY	☐ TEST	☒ ELEC/MECH SPECS

AFFECTED PRODUCT:

DALLAS P/N: DS1620
DALLAS P/N:
DALLAS P/N:
DALLAS P/N:

CHANGE FROM:	**CHANGE TO:**
DS1620 current die revision D1.	DS1620 die revision E2.
	Existing customers should not have to change hardware or software in their designs as a result of this die revision.
	The D1 revision implemented a proprietary temperature sensing architecture, and E2 is converted to a commonly used bandgap reference with sigma-delta ADC. As a result of the architectural change, there are some changes to the electrical specifications between D1 and E2, highlighted in the table attached to this PCN.

JUSTIFICATION: The new revision will be produced using the same fabrication process as the current revision. This process is qualified, and the new revision has reached qualification based on characterization of the changed circuit function and reliability testing evaluation of one lot.

TRACEABILITY: Rev E2 units will be branded with the date code yywwE2 (where yy and ww are the year and work-week of manufacture). This marking clearly identifies the die revision to the customer. Dallas Semiconductor maintains traceable date codes as branded on packaged units. Lot date code is indicated on the product shipping label.

Dallas Semiconductor/Maxim's Change Notification System is designed to keep our customer base apprised of major product, manufacturing, or facility improvements. Since these changes may affect form, fit, function, quality, or reliability, it is the customer's right to request in writing of Dallas Semiconductor/Maxim's Quality Assurance Director that alternative action be taken.

Philip A. Adams

Philip A. Adams, Quality Assurance Director

For further Information, please contact either of the people listed below.

Amy Gebrian, Business Manager
(972) 371-6240/ email: amy.gebrian@dalsemi.com

Ken Wendel, Reliability Manager
(972) 371-3726 / email: ken.wendel@dalsemi.com

(-55°C to +125°C and 2.7V≤VDD≤5.5V unless otherwise noted)

Parameter	Conditions	DS1620E2 max	DS1620D1 max	Units
Thermometer Error	0°C to +70°C 3.0V≤V_{DD}≤5.5V	±0.5	±0.5	°C
	0°C to +70°C *2.7V£V_{DD}<3.0V*	*±1.25*	±0.5	
	-55°C to +125°C	±2	See curve in DS1620 datasheet	
Temperature Conversion Time	9-bit Direct output with ability to calculate higher resolution	750	1000	ms
Thermometer Resolution		*12*	Unspecified	
Thermal Drift		±0.2	Unspecified	°C
Standby Supply Current	*0°C to +70°C*	*1.5*	1.0	μA
NV (EEPROM) Write Cycle Time		10	50	ms
EEPROM Writes	*-55°C to +55°C*	*50,000*	Unspecified	Writes
Data Retention	*-55°C to +55°C*	*10*	Unspecified	Years
High Level Input Voltage		*Min=0.7xV_{DD}*	Min=2.0	V
Low-Level Input Voltage		*Min=-0.5*	Min=-0.3	V
		Max=0.3xV_{DD}	Max=+0.6	V
Absolute Maximum Voltage on any Pin, Relative to Ground		*+6.0*	+7.0	V
Clock to Data Delay		*150*	100	ns
Input Current on Each Pin	*0.4<$V_{I/O}$<0.9xV_{DD}*	*±10*	Unspecified	μA

The DS1620 datasheet will be modified upon the effective date of this PCN with the specifications *bold and italics* in the above table. The remaining datasheet specification changes specific to revision E2 will be reflected in the DS1620 datasheet once all revision D1 inventory has been shipped from Dallas Semiconductor.